

Supercedes and Obsoletes Previous Manuals on This Subject

Technical Information No. 0010-004

# Corn Crib



# "E-A" MODEL SERIES ONLY CORN CRIB FOUNDATION

MODELS E-10A, E-15A, EX-15A, E-20A

#### GENERAL ERECTION

The crib must be set up on a level platform and securely fastened to it with the floor clamps furnished. A *concrete* or *heavy* wooden platform must be used. This is especially important if the crib you have chosen is more than ten feet in wall height.

The base of the crib must form a perfect circle or it will be difficult to make the roof fit later. Arrive at this by drawing a circle on the platform. See Concrete Plan, page 2 and Steps listed below for suggested procedure when using a concrete foundation.

#### CONCRETE PLAN—STEP BY STEP METHOD

- 1. Pour concrete slab as recommended on Concrete Plan, page 2.
- 2. Draw 8'-1%" Radius circle on fresh concrete. Drive nails through wood strip to make an accurate compass. See Fig. 1. This dimension must be accurate.
- 3. Mark off 13 spaces exactly 3'-10<sup>15</sup>/<sub>16</sub>" apart on the circle just drawn for anchor bolt location. Set the first mark where the center of the door is desired. The last mark should come within ½" of the first mark made. See Fig. 2 for wood strip compass. This dimension must be accurate.
- 4. At each mark dig out a hole about 5" in diameter, 5" deep with the bottom of the hole about 7" in diameter. Or you can bury a quart tin can in the concrete at the location of each bolt; then tear the cans out and fill around the bolts with concrete after the crib has been set up.

When using the above methods, keep in mind the holes for the anchor bolts must be shaped or sufficiently roughened so the hardened concrete around the bolts cannot pull up and away from the surrounding slab.

You may wish to use a concrete or "star-drill" to drill holes for expansion bolts after the concrete has been cured.

81-1 7/8"
For Drawing Large Circle

FIG. 1

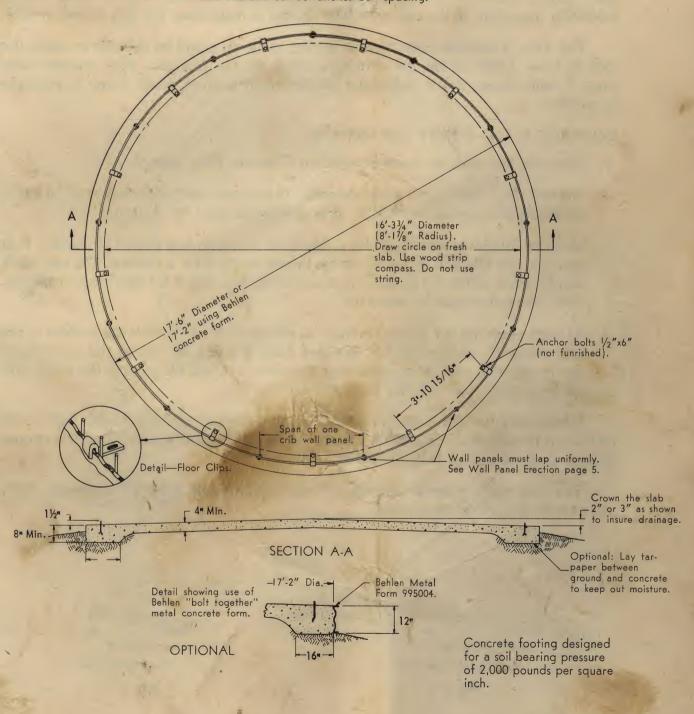
3'-10 15/16" For Bolt Location

FIG. 2

### BEHLEN

# "E-A" MODEL SERIES ONLY CONCRETE PLAN CORN CRIB MODELS E-10A, E-15A, EX-15A, E-20A

Layout showing recommended concrete slab size and correct anchor bolt spacing.



## "F-A" MODEL SERIES ONLY CORN CRIB FOUNDATION

Models F-10A, F-15A, FX-15A

#### GENERAL ERECTION

The crib must be set up on a level platform and securely fastened to it with the floor clamps furnished. A *concrete* or *heavy* wooden platform must be used. This is especially important if the crib you have chosen is more than ten feet in wall height.

The base of the crib must form a perfect circle or it will be difficult to make the roof fit later. Arrive at this by drawing a circle on the platform. See concrete plan, page 4, and Steps listed below for suggested procedure when using a concrete foundation.

#### CONCRETE PLAN—STEP BY STEP METHOD

- 1. Pour concrete slab as recommended on Concrete Plan, page 4.
- 2. Draw 6'-3\%\" Radius on fresh concrete. Drive nails through wood strip to make an accurate compass. See Fig. 3. This dimension must be accurate.
- 3. Mark off 10 spaces exactly 3'-10%6" apart on the circle just drawn for Anchor Bolt location. Set the first mark where the center of the door is desired. The last mark should come within ½" of the first mark made. See Fig. 4 for wood strip compass. This dimension must be accurate.
- 4. At each mark dig out a hole about 5" in diameter, 5" deep with the bottom of the hole about 7" in diameter. Or, you can bury a quart tin can in the concrete at the location of each bolt; then tear the cans out and fill around the bolts with concrete after the crib has been set up.

When using the above methods, keep in mind the holes for the anchor bolts must be shaped or sufficiently roughened so the hardened concrete around the bolts cannot pull up and away from the surrounding slab.

You may wish to use a concrete or "star-drill" to drill holes for expansion bolts after the concrete has been cured.

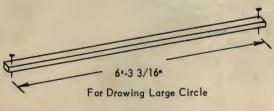


FIG. 3



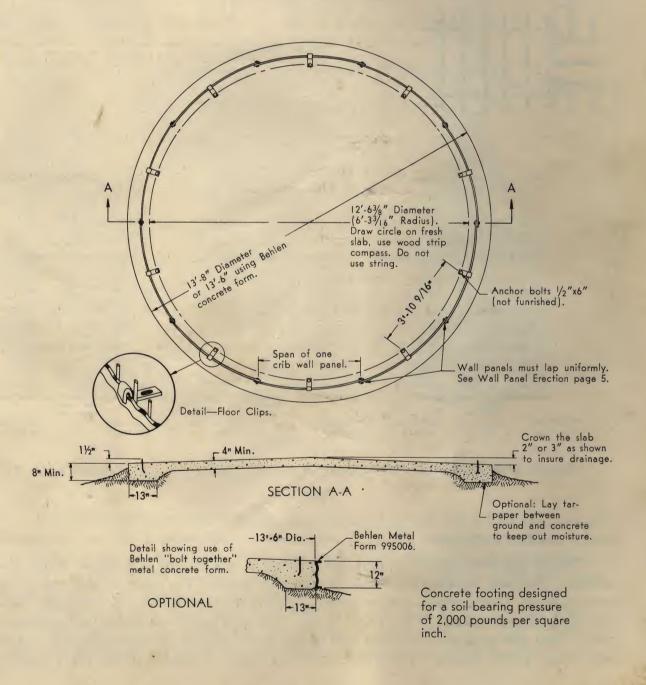
For Bolt Location

FIG. 4

### "F-A" MODEL SERIES ONLY CONCRETE PLAN

Corn Crib Models F-10A, F-15A, FX-15A

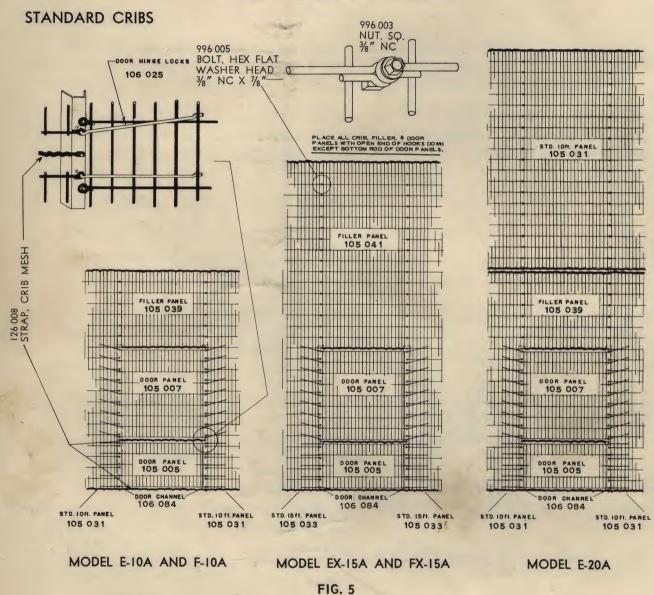
Layout showing recommended concrete slab size and correct anchor bolt spacing.



#### CRIB COMPOSITION AND WALL PANEL ERECTION

Models "E-A" are 16'-6" in Diameter

Models "F-A" are 12'-8" in Diameter



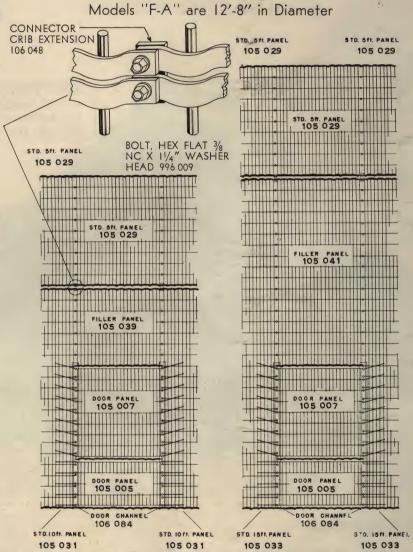
#### WALL PANEL ERECTION

Center the wall panels around the outside of the anchor bolt circle. When assembling the wall panels, care must be taken to have all the open ends of the loops hooked *down*. The panels should be assembled so that the ends overlap uniformly (see detail on concrete plan). If the loops on one edge of a panel are under the preceding panel, then the loops on the other side of the panel should be on the outside of the next panel. Never should a panel be completely inside or outside of the other panels.

#### CRIB COMPOSITION AND WALL PANEL ERECTION

Models "E-A" are 16'-6" in Diameter

SPECIAL CRIBS



MODEL E-15A AND F-15A

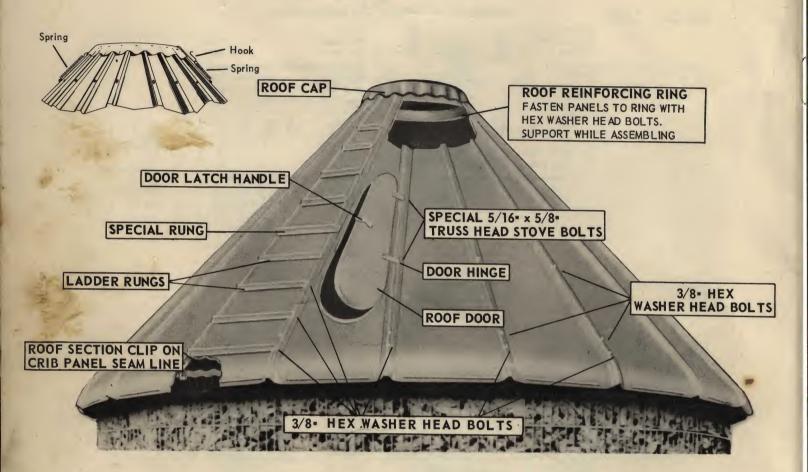
MODEL EX-20A

FIG. 6

The above drawings, showing the composition of special Behlen round cribs, also illustrates how the door sections of your crib should look when assembled. Note that in Fig. 5 the door channel is placed on the inside of the crib on the panel seamline and acts as a framework for the door panels. Also note the positioning of the door hinge locks in the upper and lower door panels.

The %" x 1¼" hex head bolts furnished should be used where the roof clips and extension connectors are fastened to the wavy edged reinforcing bars. This includes the separate bars furnished for the door as well as those welded to the top and bottom of each panel.

### CRIB ROOF ASSEMBLY Models E-10A, E-15A, EX-15A, E-20A, F-10A, F-15A, FX-15A



#### ROOF ASSEMBLY—GENERAL

CAUTION: Never attempt to put the roof on after the crib is full of corn. It will not fit due to the fact that the corn will throw the top of the crib out-of-round.

A number of different methods have been used by our customers for putting the roof on the crib. One of these is to set up a tall "gin pole" at the center of the crib location, holding it upright with the top of a large farm elevator, and pulling the roof up with a block and tackle after assembling it on the ground. The crib is then assembled under the roof.

The method more frequently used is to erect a scaffold by placing three 18 foot  $2 \times 6$ 's for "E-A" Models (or 14 foot  $2 \times 6$ 's for "F-A" Models) through the crib mesh at a point about  $1\frac{1}{2}$  feet down from the top. Lay cross boards on them for a working platform. Be sure not to throw the top of the crib out of round when placing the  $2 \times 6$ 's through the mesh. See Fig. 8 at right.

#### CRIB ROOF ASSEMBLY

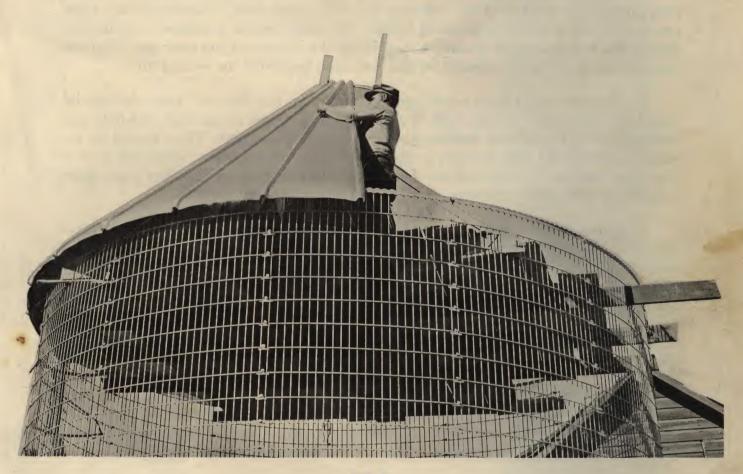


FIG. 8

#### STEP BY STEP METHOD

1. Interlock three of the roof sections and bolt them together, also bolt them to the reinforcing ring, using the %" x %" hex head bolts. Place this assembly on top of the crib and hold the reinforcing ring in place by propping it up from the scaffold platform. These props should hold the bottom edge of the reinforcing ring in the center of the crib and the correct distance above the top of the bars on the upper end of the wall panels. (Note: 84" is the correct distance on all "E-A" Models; "F-A" Models should be 61"). Do not put the bottom bolts in any of the panels until all the other bolts are in and the support holding up the roof has been removed. Temporarily, wire these panels to the wall to retain them in place. One seam of the roof should be directly over the wall seam joint.

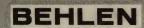
(continued next page)

#### CRIB ROOF ASSEMBLY (continued)

- 2. Add the remainder of the roof sections. One of the roof sections has an opening formed in it for the roof access door. It may be placed anywhere in the roof for your convenience. Install this panel last. Looking at the roof from the outside, the ladder rungs must be installed on the roof panel to the left of this door section. The ladder rung that fits to the left of the center of the roof access door is formed on the right end and acts as a jamb for the latch handle. The latch handle is shipped with its bolt and double nut assembled. Install the handle on the outside of the roof door. Tighten the first nut down to the desired friction and then lock with the second nut.
- 3. The roof door hinges are shipped assembled to the door and have one special round head stove bolt in each hinge for attaching the hinges to the roof. The bolts are installed in the hinge holes backwards for crating purposes only. They should be reversed and installed with the door in the wide open position so that when the door is closed the head of the stove bolt will be between the hinge leaves. The door hinge holes are slightly oversized so that the door may be adjusted to fit properly.
- 4. Install the last roof section. In order to make the last roof section fit properly, you must be sure that the reinforcing ring is held up to the proper height ("E-A"—84"; "F-A"—61"). Re-check this dimension at this time, as the additional weight of each roof section may have caused it to change. Now, remove the supports from under the reinforcing ring and permit the roof to settle down on top of the crib.
- 5. Next, add all the roof section clips—one at each wall panel bolt seam. The clips should be installed under the head of the wall panel bolt on the outside of the strap. Also, it should be under the nut, of the roof panel bolt, on the under side of the roof. Clip the intermediate roof clips to the wall panel strap, centering between two wall panel bolt seams and bolt to the roof panel seam line. Leave the bolts loose until all clips are installed. Be sure the wall panels at the eave of the crib form a perfect circle before attempting to bolt the roof to the crib with the roof section clips.
- 6. The roof cap is held in place by two spring assemblies, anchored on roof panel seamlines by the first bolt down from top. Locate the cap release spring-hook assembly on the second seamline to the right of the roof ladder. Locate the other spring on the opposite side of the roof cap directly across from the release assembly.

#### MODEL 'E-A' CORN CRIB PARTS PRICE LIST

BARREL PARTS (E-A MODELS)								
CATALOG NO.	CRIB CATALOG NO.	100 020 E-10A	100 022 E-15A	100 026 EX-15A	100 024 E-20A	102 054 E-5A Ext.	102 056 E-10A Ext	PRICE EACH
105 039 105 041 105 007 105 005 105 029	Filler Panel 3'-7" Filler Panel 8'-7" Upper Door Panel 4' Lower Door Panel 2' Standard Panel 5'	1 0 1 1 0	1 0 1 1 13	0 1 1 1 0	1 0 1 1 0	0 0 0 0 13	0 0 0 0	\$10.15 15.60 7.20 3.80 10.10
105 031 105 033 106 084 106 025 106 086	Standard Panel 10: Standard Panel 15: Door Channel Door Hinge Lock Crib Mesh Strap, Galvanized	12 0 2 28 2	12 0 2 28 2	0 12 2 28 2	25 0 2 28 2	0 0 0 0	13 0 0 0 0	19.05 27.20 4.45 .15 .85
106 047 106 048	Floor Clip Extension Connector	13	13 13	13	13 13	0	0 13	.25
996 003 996 005 996 009	3/8" Square Nut 3/8" × 7/8" Hex Flat Washer Head Bolt 3/8" × 1-1/4" Hex Flat Washer Head Bolt	275 258 17	405 362 43	405 388 17	535 492 43	175 141 30	301 271 30	.01 .02 ,03
	102 032 - ROOF PART	S FOR V	ARIOUS	E-A MOI	DELS			4-4-7
CATALOG NO.	DESCRIPTION					NUMBER PER CRIB		PRICE EACH
106 052 106 053 106 073 996 034 2208 008	Roof Section Door Roof Section Roof Door Door Latch Handle Roof Door Hinge	25 1 1 1 2		\$ 6.00 6.55 2.65 .55 .30				
106 054 106 055 106 056 106 057 106 058	Ladder Rung (5¾* Hole to Hole)  Ladder Rung (8* Hole to Hole)  Ladder Rung (10-3/8* Hole to Hole)  Ladder Rung (12-5/8* Hole to Hole)  Ladder Rung (14-¾* Hole to Hole)							.45 .45 .60 .55
106 059 106 060 106 061 106 062 105 037	Ladder Rung (16-7/8* Hole to Hole)  Ladder Rung (18¾* Hole to Hole)  Ladder Rung (20-7/8* Hole to Hole)  Ladder Rung (24-1/8* Hole to Hole)  Roof Reinforcing Ring							.75 .60 .65 .70 8.10
106 075 105 045 3428 021 106 049 106 074	Roof Cap Roof Cap Hook Assembly 3/** O.D. x .090 Wire x 7** Over Coils Spring Roof Section Clip Intermediate Roof Clip 13							7.40 2.80 .30 .20 .10
996 003	3/8" Square Nut (4 Shipped w/106 073, 2 Shipped w/996 034)	292		.01				
996 005	3/8" x 7/8" Hex Flat Washer Head Bolt (4 Shipped w/106 073, 1 w/996 034) 290							.02
1328 001	5/16" x 5/8" Truss-Head Stove Bolt (Shipped w/2208 008) 2						.02	
2688 003 3948 001	5/16* Square Nut (Shipped w/1108 008) 5/16* Round Washer (Shipped w/996 034)						2	:01



#### MODEL \*F-A\* CORN CRIB PARTS LIST

BARREL PARTS (F-A MODELS)								
CATALOG NO.	CRIB CATALOG NO.	100 030 F-10A	100 032 F-15A	100 034 FX-15A	102 058 F-5A Ext.	102 060 F- 10A Ext.	PRICE EACH	
105 039 105 041 105 007 105 005 105 029 105 031 105 033 106 084 106 025	Filler Panel 3:-7" Filler Panel 8:-7" Upper Door Panel 4: Lower Door Panel 2: Standard Panel 5: Standard Panel 10: Standard Panel 15: Door Channel Door Hinge Lock	1 0 1 1 0 9 0 2 28	1 0 1 1 10 9 0 2 28	0 1 1 1 0 0 9 2 28	0 0 0 0 10 0 0	0 0 0 0 0 0	\$10.15 15.60 7.20 3.80 10.10 19.05 27.20 4.45 .15	
106 086 106 047 106 048	Crib Mesh Strap, Galvanized Floor Clip Extension Connector	10 0	10 10	10 0	0 0 10	0 0 10	.85 .25 .10	
996 003 996 005 996 009	3/8" Square Nut 3/8" x 7/8" Hex Flat Washer Head Bolt 3/8" x 1¼" Hex Flat Washer Head Bolt	238 214 24	312 278 34	310 296 14	110 90 20	210 190 20	.01 .02 .03	

#### 102 046 - ROOF PARTS FOR VARIOUS \*F-A\* MODELS

CATALOG NO.	DESCRIPTION	NUMBER PER CRIB	PRICE EACH
106 064 106 065 106 073 996 034 2208 008	Roof Section Door Roof Section Roof Door Door Latch Handle Roof Door Hinge	19 1 1 1 2	\$ 5.10 5.65 2.65 .55 .30
106 066 106 067 106 068 106 069 106 070	Ladder Rung (6½* Hole to Hole) Ladder Rung (9¼* Hole to Hole) Ladder Rung (11-7/8* Hole to Hole) Ladder Rung (14½* Hole to Hole) Ladder Rung (17* Hole to Hole)		.50 .50 .55 .55
106 071 106 062 105 043 106 076 105 045	Ladder Rung (20" Hole to Hole) Ladder Rung (24-1/8" Hole to Hole) Roof Reinforcing Ring Roof Cap Roof Cap Roof Cap		.65 .70 7.95 7.40 2.80
3428 021 106 049 106 074 996 003	3/4" O.D. x .090 wire x 7" Over Coils Spring Roof Section Clip Intermediate Roof Clip 3/8" Square Nut (2 Shipped w/996 034) 4 Shipped w/106 073)	1 10 10 185	.30 .20 .10
996 005	3/8" x 7/8"Hex Flat Washer Head Bolt (4 Shipped w/106 073, 1 Shipped w/996 034)	183	.02
1328 001	5/16" x 5/8" Truss-Head Stove Bolt (Shipped w/106 073)	2	.02
2688 003 3948 001	5/16" Square Nut (Shipped w/2208 008) 5/16" Round Washer (Shipped w/996 034)	2 2	.01

#### CORN CRIB ACCESSORIES—INSTALLATION



FIG. 9



FIG. 10



FIG. 11



FIG. 12

#### VENTILATING TUBES

Installation of the ventilating tubes available in 10" and 16" diameters by 4' long is simply a matter of preference in location. The tubes can be placed vertically or horizontally in the crib to meet individual ventilation requirements. See Ventilating Plans A and B page 13.

#### SELF FEEDER

Width, 54"; height, 30"; depth, 18". To extract ear corn from the bottom crib door, position the Self Feeder as shown in photograph.

#### SHELLER DRAG OR VENTILATING TUNNEL

The tunnel sections are 17" high at center, 20" wide at base, and available in 2 foot sections. Interlock to form tunnel across the crib floor. Use in conjunction with the Self Feeder. See Ventilating Plans A and B, page 13.

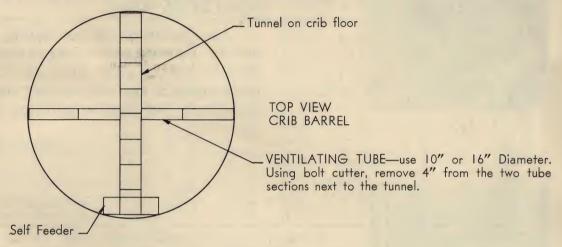
#### EAR CORN SPREADER

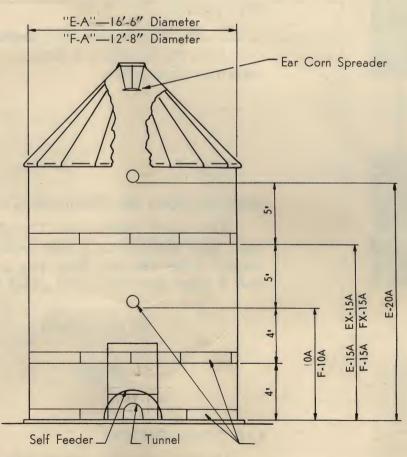
Attaches over the roof opening and is positioned beneath the roof cap. It is easily changed from one crib to the next without any clamps or bolts.

#### CORN CRIB VENTILATING PLANS

NOTE: When sealing corn, check with your local A.S.C. office for approved method of ventilation.

PLAN "A" showing preferred use of Behlen Ventilating Tube and Tunnel. Plan A offers increased efficiency in air flow because of natural horizontal wind movement.





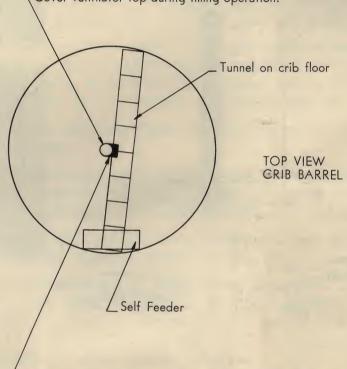
VENTILATING TUBE—must extend to wall inside crib to provide free air passage. One extra length of ventilating tube is provided in table (next page) to allow for vent-tube extension. Cut extra tube with bolt cutter and interlock short sections with standard sections.

#### CORN CRIB VENTILATING PLANS

NOTE: When sealing corn, check with your local A.S.C. office for approved method of ventilation.

PLAN "B" showing alternate method in the use of Behlen Ventilating Tube and Tunnel.

Place 10" or 16" Diameter Ventilating Tube in vertical position along side tunnel. Do not set vertical ventilator on top of tunnel because excessive weight acting on ventilator could flatten the tunnel beneath. The ventilator must extned out of top of corn when crib is filled. Cover ventilator top during filling operation.

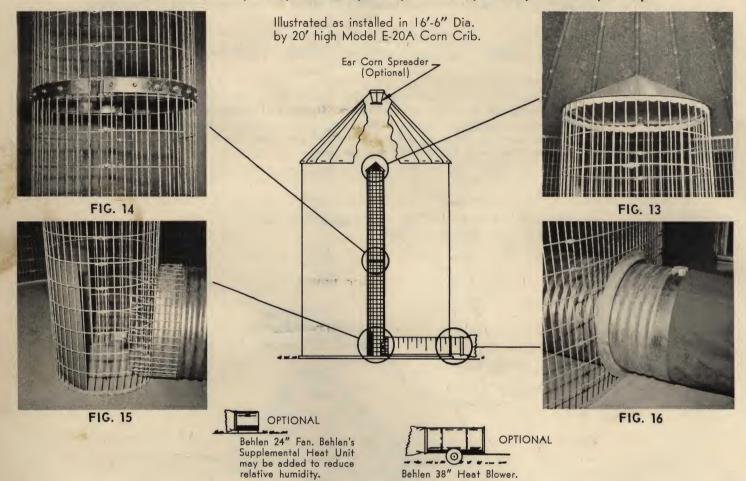


The vertical ventilator and tunnel touch at the center of the crib floor. Provide sheet metal, mesh or wooden bridge for free air passage from tunnel to ventilator.

PLANS A AND B-LENGTH OF TUNNEL AND VENTILATING TUBE REQUIRED								IDED	
	TEXTS A AND BELLIOTH OF TORINGE AND VENTILATING TOBE REGOT						IKED		
-	Part	Crib Catalog No.	100 020	100 030	100 022	100 032	100 026	100 034	100 024
Plan	Catalog No.	Description	E-10A	F-10A	E- 15A	F-15A	EX-15A	FX-15A	E-20A
A or B	110 001	Tunnel	161	12:	16.	12.	16.	12.	16.
A	110 003	10" Ventilating Tube	52	40.	681	52.	68.	52.	84.
A	110 005	16" Ventilating Tube	52.	40.	681	52•	68.	52•	84.
В	110 003	10* Ventilating Tube	16.	16.	20.	20.	20.	20.	28•
В	110 005	16. Ventilating Tube	16.	16.	20.	20.	20.	20.	28:

#### CORN CRIB DRYING SYSTEMS—INSTALLATION

SYSTEMS-100036 (E-10A), 100042 (E-15A), 100040 (EX-15A), 100038 (E-20A)



#### OPERATIONAL DATA

Forced air without heat can be used to dry ear corn at 20-30% moisture. Minimum air flow should be 5-10 cfm per bu. The fan should be operated when the humidity is below 80% and the temperature is above 50° F. However, at cribbing time, if the temperature is below 50° F. the fan should be operated several hours per day. This will prevent heating. The fan can also be operated in Spring to further reduce the moisture. At 30% moisture corn, approximately 600 bu. per fan H.P. can be dried. It may be impossible with natural forced air to get the moisture content of the kernels below 20% if the humidity remains high with low temperatures.

Heated air is used in adverse weather and for fast drying. The drying air temperature should not be more than 140° F. or less than 60° F. warmer than the outdoor temperature. Drying can be stopped after the wettest corn is below 20% when natural ventilation is effective. After the heat is discontinued, the fan should be run 4-6 hours. This will cool the corn to outside temperatures.

#### SYSTEM PARTS—VENTILATOR SECTION

1. 31" Diameter Jumbo Ventilator in 5' and 9' length.

(Two115001, 9-2 half sections for E-10 A crib.)

(Two115011, 5-1 half sections and two115013, 9-1 half sections for E-15A and EX-15A cribs.)

(Four 115013, 9-1 half sections for E-20A crib.)

The Jumbo Ventilator is shipped in half sections, bolt together with %" dia. x %" bolts provided.

- 2. No. 116016, Cap for Jumbo Ventilator. Fasten cap to ventilator using 2 116017 clips and 4—%" dia. x %" bolts and nuts as shown in Fig. 13.
- 3. No. 116028 and 116029 Coupler Bands, use 2 each to join Ventilator tube assemblies. This is a 4 piece assembly making up an inter and outer ring. Position bands and bolt together with %" dia. x %" bolts and nuts as shown in Fig. 14. (Coupler bands needed for E-15A, EX-15A and E-20A cribs only.)
- 4. No. 116013, Air Deflector Panel. Position panel as shown in Fig. 15 and wire to vertical ventilator.
- 5. No.115007, Mesh Adapter to connect air entry tube to vertical ventilator. This is a two piece mesh band held together at the bottom with one 116025 hook and bolted together at top with one 3" dia. x %" bolt and nut.
- 6. No. 116014 "J" Bolt and No. 116015 Adapter Strap to hold Mesh Adapter to vertical ventilator. Position as shown in Fig. 15.
- 7. No. 3748-005 Corrugated Air Entry Tube. Slide tube through 32" dia. angle ring welded into crib panel and position flush against vertical ventilator as shown in Fig. 15 and 16.

#### OPTIONAL EQUIPMENT—not included in Systems

- 8. Canvas Duct. Two models available, No. 114004 for Fan attachment and No. 114002 for Heat Blower hook-up. One clamping band on each end of canvas duct insures air tight connection.
- 9. Behlen 24" Fan, 5 H.P. recommended, supplementary Heat Unit available (see Fan literature). Connect Fan to Air Entry Tube with canvas duct.
- 10. Behlen 38" Heat Blower (see Heat Blower literature), connect to Air Entry Tube with canvas duct.

Note: For Existing Cribs

The No. 116-035 32" dia. angle ring, shown in Fig 16, that receives the Air Entry Tube is available for field installation. To install, position ring and weld to crib panel, remove excess mesh inside ring.

DRYING SYSTEMS, PARTS-PRICE LIST (VENTILATOR SECTION ONLY)							
Part Catalog No.	Drying System No. — — — — — — — — — — — — — — — — — — —	100 036 (E-10A)	100 042 (E-15A)	100 040 (EX-15A)	100 038 (E-20A)	Weight # Each	Price Each
116 016	Ventilator Cap	1	1	1	1	11.10	\$ 5.65
116 017	Ventilator Cap Clip	2	2	2	2	0.35	.50
115 011	5-1, Jumbo Ventilator Half Section	0	2	2	0	30.65	8.50
115 013	9-1, Jumbo Ventilator Half Section	0	2	2	4	53.52	14.85
115 001	9-2, Jumbo Ventilator Half Section	2	0	0	0	56.12	15.30
116 028	Ventilator Coupler Band (inner)	0	2	2	2	2.37	1.85
116 029	Ventilator Coupler Band (outer)	0	2	2	2	2.23	1.45
116 013	Air Deflector Panel	1	1	1	1	10.44	4.55
115 007	Mesh Adapter, Half Section	2	2	2	2	7.31	4. 50
116 025	Air Tube Adapter Hook	1	1	1	1	0.09	.25
116 015	Adapter Strap	2	2	2	2	0.22	. 15
3748 005	Corrugated Air Entry Tube 32" Dia. x 96" x 16" Ga. Galvanized	1	1	1	1	190.0	62.00
116 014	"J" Bolt 5/16" x 6"	2	2	2	2	0.13	.40
996 005	3/8" x 7/8" Hex Flat Washer Head Bolt	41	87	87	103	.06	.02
996 003	3/8" Square Nut	41	87	87	103	.02	.01

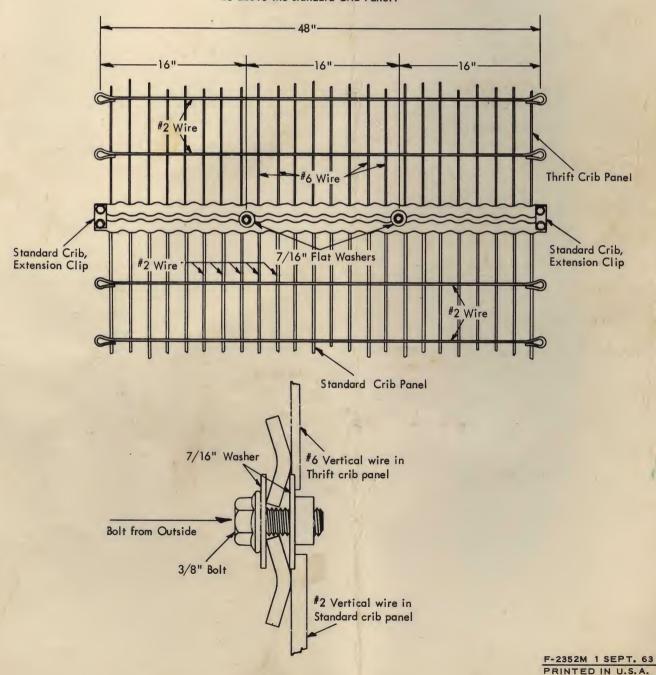
All Prices List, F.O.B. Columbus, Nebraska -- Subject to Change Without Notice

### ERECTION INSTRUCTION SUPPLEMENT THRIFT CRIBS

TE-10, TF-10, TE-15, TF-15, Ext. TE & Ext. TF

Thrift crib panels have #6 vertical wires. When erecting a 15 ft. wall, be sure to use the 81" long door channels(part 106 084). This 15' wall consists of a 5' standard wire lower panel and a 10' thrift upper panel. The thrift extension panels must always be installed above the standard crib panels. When connecting the thrift panels to the standard panels, use 7/16" flat washers at 1/3 points between seamlines to clamp the end straps of the upper (thrift) and lower panels together. The standard crib extension clip is used (as before) at the seamlines.

NOTE: Thrift Crib Panel must always be above the standard Crib Panel.



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